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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,149	02/20/2004	Andreas Richter	081583-0294	5352

26371 7590 06/03/2005

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EXAMINER
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YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/784,149

Applicant(s)

RICHTER ET AL.

Examiner

Marie R. Yamnitzky

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14-18, 21 and 23 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 19, 20, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date rec'd 09 Mar 2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. This Office action is in response to applicant's amendment and election filed March 09, 2005. Applicant's amendment cancels claims 10-13 and adds claims 14-24.

Claims 1-9 and 14-24 are pending.

2. Applicant's election of Group I and election of species in the reply filed on March 09, 2005 is acknowledged. Applicant elects the species in which A is a triply unsaturated benzene ring,  $R^{10}$  is  $-C(=X^1)-X^2R^1$ ,  $R^{11}$  is  $-C(=X^3)-X^4R^5$ , and each of  $X^1-X^4$  is oxygen. A device comprising the compound required by new claim 24 is elected as the ultimate species.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). All pending claims read on Group I. Claims 1, 2, 4-9 and 14-24 read on the elected species. Claim 3 does not read on the elected species, but a reference relevant to claim 3 is of record. Therefore, claim 3 has also been examined.

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 602.

It does not state that the person making the oath or declaration has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.

The declaration is directed to PCT Application No. PCT/DE02/03110, filed 21 August 2002. The present application is not a 371 application of the indicated PCT application, and is not a continuation or a divisional of a 371 application of the indicated PCT application. Therefore, the declaration does not properly identify the specification to which the declaration is directed.

Based on the communications received August 16, 2004, the declaration filed in the present application is a copy of a declaration and power of attorney originally filed in copending Application No. 10/487,138. (The paper headed "COMMUNICATION" indicates that the U.S. National Stage Application of PCT/DE02/03110 has been designated Application No. 10/784,149. 10/784,149 is the present application. The correct Application No. for the U.S. National Stage Application of PCT/DE02/03110 is 10/487,138.) While the present application is in the same family as 10/487,138, the present application is not a continuation or a divisional of 10/487,138. The specification, including the claims, of the present application is not the same as the specification, including the claims, of copending Application No. 10/487,138 or PCT/DE02/03110. Accordingly, it is not clear that the person making the declaration has reviewed and understands the contents of the present specification, including the claims.

4. In the remarks accompanying applicant's amendment and election filed March 09, 2005, applicant states that the specification of the present application is identical to that of the International Application (PCT/DE02/03110) and the related U.S. National Stage Application (10/487,138) with the exception of the cross reference to related applications. Applicant states

that all of the claims of the present application are supported by the specification of the PCT application and therefore no new declaration beyond the declaration executed with respect to the International Application is required.

The examiner has not compared the present specification and the specifications of the related PCT and 371 applications word-for-word, but notes that the specifications are not identical for at least the reason that the contents are not presented in the same order. For example, in the present specification, Tables 2-6 appear before Table 1 whereas in the 371 application, Tables 2-6 appear after Table 1.

The issue of whether the present claims are supported by the specification of the related PCT application is separate from the issue of whether applicant has reviewed and understands the contents of the present specification, including the claims. The declaration and power of attorney includes the statement "I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above." The "above-identified specification, including the claims" is PCT Application No. PCT/DE02/03110 filed August 21, 2002, rather than the present application filed February 20, 2004. The present application is not a 371 application of the PCT, and therefore identification of the PCT application as the specification/claims which have been reviewed and understood is not a proper identification of the specification/claims which have been reviewed and understood. A new oath or declaration is required in order to show that applicant has reviewed and understands the contents of the present specification, including the claims.

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5. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on August 21, 2001. It is noted, however, that applicant has not filed a certified copy of the 101 41 266.5 application as required by 35 U.S.C. 119(b).

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 defines  $X^1$  and  $X^3$  as oxygen, but depends from claim 1 in which  $X^1$  and  $X^3$  are not necessarily present. It is not clear if claim 2 is limiting  $R^{10}$  to  $-C(=X^1)-X^2R^1$  and  $R^{11}$  to  $-C(=X^3)-X^4R^5$  so that  $X^1$  and  $X^3$  are necessarily present, or if claim 2 is merely further limiting an option.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-284250.

Applicant submitted an abstract and a few pages of a machine-assisted translation for this document. A machine-assisted translation of the full document is provided with this Office action.

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Compounds having the formula shown in the abstract wherein each of Y1 and Y2 is a cyano group, as in the last compound named in paragraph [0029], meet the limitations of a 2,5-diaminoterephthalic acid derivative of present formula 1a wherein each of R<sup>10</sup> and R<sup>11</sup> is -CN, R<sup>3</sup> and R<sup>4</sup> form an unsaturated ring, and R<sup>7</sup> and R<sup>8</sup> form an unsaturated ring.

The compounds are disclosed for use in the luminous layer of an organic electroluminescent element, thus anticipating the device of present claims 1-3. (Claim 2 is included in this rejection subject to clarification as to whether claim 2 is defining a requirement or an option. Interpreting claim 2 as defining an option, rather than a requirement, claim 2 is anticipated by the prior art.)

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 4-7, 14-18, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US 5,281,489) in view of Butterfield (US 3,671,451).

Mori et al. disclose an organic electroluminescent (EL) device comprising a fluorescent luminescent agent in the emitter layer. For example, see the abstract. Mori et al. teach that the fluorescent luminescent agent may be chosen from dyes for a dye laser, fluorescent brighteners

and compounds capable of exhibiting fluorescence upon ultra-violet radiation. Mori et al. do not explicitly teach a compound of present formula 1a as the fluorescent luminescent agent.

Butterfield discloses compounds of present formula 1a and teach that they are fluorescent compounds which are capable of exhibiting fluorescence upon ultra-violet radiation. See the whole patent. In particular, see column 2, lines 54-62 and the Table beginning at the bottom of column 4. Each of the compounds defined in the Table is a compound of formula 1a as defined in present independent claims 1 and 14, and all but the first compound are compounds of formula 1a as defined in present independent claim 16. The last compound in the Table is an example of a compound of formula 1a as defined in present claims 1, 2, 4-7, 14-18, 21 and 23.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to select from known fluorescent compounds within Mori's guidelines in order to make an organic EL device as taught by Mori et al. One of ordinary skill in the art at the time of the invention would have been motivated to select a particular fluorescent compound based on the properties, such as color of light emitted by the compound, that the compound would provide to the device. Based on Mori's teachings, one of ordinary skill in the art at the time of the invention would have reasonably expected that fluorescent compounds such as taught by Butterfield could be used as fluorescent luminescent agents in the emitter layer of Mori's device.

11. Claims 8, 9, 19, 20, 22 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



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12. Miscellaneous:

The examiner notes that the various fluorine-substituted phenyl groups of the list "2-fluorophenyl...pentafluorophenyl" that are set forth in claim 1 are also covered by the earlier recited broader possibility of an aryl substituted singly or multiply with fluorine.

13. The references made of record and not relied upon are considered pertinent to applicant's disclosure.

WO 03/076390 A1 and WO 2004/026809 A1 disclose organic electroluminescent devices meeting the limitations of present independent claims 1, 14 and 16 and some of the dependent claims. However, neither of these documents constitutes prior art.

14. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for Art Unit 1774 is (703) 872-9306 for all official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
May 31, 2005



MARIE YAMNITZKY  
PRIMARY EXAMINER

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